

This listing of claims will replace all prior versions,
and listings, of claims in the application:

1 Claim 1 (original): Device for correcting defective
2 vision or corneal disease of an eye, characterised by the
3 combination of
4 - an instrument (16) for deforming the cornea of the
5 eye with
6 - an instrument (18, 20) for hardening the cornea
7 - at least one radiation source (20) for irradiated
8 the cornea,
9 one or more radiation sources (20) in the instrument
10 being arranged so that the radiation emitted by them
11 strikes the cornea homogeneously.

1 Claim 2 (original): Device according to Claim 1,
2 characterised in that the instrument (16) for deforming
3 the cornea comprises a shaped body which can be placed on
4 the eye.

1 Claim 3 (previously presented): Device according to
2 Claim 1, characterised in that the instrument is
3 configured so that it can be brought in contact with the
4 cornea for proper use.

1 Claim 4 (original): Device according to Claim 1,
2 characterised in that the instrument is configured so
3 that it lies at a predetermined distance from the cornea
4 for proper use.

1 Claim 5 (original): Device according to Claim 1,
2 characterised in that light-emitting diodes are provided
3 as the radiation source.

1 Claim 6 (original): Device according to Claim 1,
2 characterised by a radiation source with optical
3 waveguides (52).

1 Claim 7 (original): Device according to Claim 1, having
2 a conical body(18) for guiding the radiation.

1 Claim 8 (original): Device according to Claim 1, having
2 a radiation sensor (28) for detecting a part of the
3 radiation emitted by the radiation source or radiation
4 sources.

1 Claim 9 (original): Device according to Claim 1,
2 characterised by a control or regulating instrument (24)
3 which can control or regulate the radiation.

1 Claim 10 (original): Device according to Claim 1,
2 characterised by a device (36, 38) for measuring the
3 distance between a component of the device and the
4 cornea.

1 Claim 11 (original): Device according to Claim 1,
2 characterised in that the device comprises a plurality of
3 radiation sources (20) which are arranged so that their
4 radiation cones (56) allow homogeneous illumination of a
5 cornea by overlapping.

1 Claim 12 (original): Device according to Claim 1, having
2 a device (22) for driving individual radiation sources.

1 Claim 13 (original): Device according to Claim 1, having
2 means for determining properties of the cornea.

1 Claim 14 (original): Operation microscope combined with
2 a device according to Claim 1.

1 Claim 15 (original): Device having a surgical laser
2 system for refractive corrections of the cornea, in
3 combination with a device according to Claim 1.

1 Claim 16 (previously presented): Device according to
2 Claim 2, characterised in that the instrument is
3 configured so that it can be brought in contact with the
4 cornea for proper use.

1 Claim 17 (new): A device for correcting vision of an eye
2 having a cornea, said device comprising:
3 - an instrument having a shaped body that is brought
4 into engagement with the cornea for shaping the
5 cornea;
6 - means for generating electromagnetic radiation;
7 and
8 - means for directing said electromagnetic radiation
9 through said body into said cornea for activating a
10 photosensitizer that is distributed in the cornea
11 for hardening the cornea, wherein said
12 photosensitizer is riboflavin.

1 Claim 18 (new): A device for correcting vision of an eye
2 having a cornea, said device comprising:
3 - an instrument having a shaped body that is brought
4 in engagement with the cornea for shaping the
5 cornea;
6 - means for generating electromagnetic radiation;
7 - means for directing said electromagnetic radiation
8 into said cornea for activating a photosensitizer
9 that is distributed in the cornea for hardening the
10 cornea; and
11 - control instruments for controlling a distribution
12 of said electromagnetic radiation over the cornea,
13 said control instruments being adapted to control
14 the quantity of radiation striking the cornea per
15 unit area selectively as a function of the position
16 on the cornea.

1 Claim 19 (new): A device according to claim 18, wherein
2 said control instruments control the quantity of
3 radiation striking the cornea per unit area such that
4 stronger hardening of the cornea takes place in more
5 peripheral regions than in more central regions of the
6 cornea.

1 Claim 20 (new): A device according to claim 18, wherein
2 said control instruments control the quantity of
3 radiation striking the cornea per unit area are such that
4 stronger hardening takes place in more central regions of
5 the cornea than in more peripheral regions.

1 Claim 21 (new): A method for correcting vision of an eye
2 having a cornea, said method comprising the steps of:

3 a) introducing riboflavin as a photosensitizer into
4 the cornea;
5 b) providing an instrument having a shaped body and
6 bringing said instrument into contact with the
7 cornea for shaping the cornea;
8 c) generating electromagnetic radiation; and
9 d) directing said electromagnetic radiation onto the
10 cornea for hardening the cornea by cross-linking
11 said riboflavin.

1 Claim 22 (new): A method for correction vision of an eye
2 in accordance with claim 21, wherein the step of
3 providing an instrument having a shaped body and bringing
4 said instrument into contact with the cornea for shaping
5 the cornea includes an over deformation of the cornea
6 such that the cornea is deformed more strongly than the
7 actual deformation goal.

1 Claim 23 (new): A method for correcting vision of an eye
2 having a cornea, said method comprising the steps of:
3 a) providing an instrument having a shaped body and
4 bringing said instrument into contact with the
5 cornea for shaping the cornea;
6 b) introducing riboflavin as a photosensitizer into
7 the cornea; and
8 c) generating electromagnetic radiation, and
9 directing said electromagnetic radiation onto the
10 cornea for hardening the cornea by cross-linking
11 said riboflavin.

1 Claim 24 (new): A method for correction vision of an eye
2 in accordance with claim 23, wherein the step of

3 providing an instrument having a shaped body and bringing
4 said instrument into contact with the cornea for shaping
5 the cornea includes an over deformation of the cornea
6 such that the cornea is deformed more strongly than the
7 actual deformation goal.